



INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

Bean Blossom/Patricksborg Ground Water Contamination Investigation

Federal Programs Section – Site Investigation Program

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Background Information:

- Bean Blossom/Patricksborg (BBP) Water Corporation serves drinking water to a population of approximately 9,900 individuals throughout the communities of Spencer, Stinesville, Patricksborg, and Bowling Green in Owen County, Indiana.
- The BBP Water Corporation has a total of seven municipal ground water wells in two well fields located within Spencer, Indiana.
 - A well field is the land above and surrounding wells that are placed in an underground water source (aquifer).
- In June 2011, BBP Water Corporation first discovered tetrachloroethylene (PCE) contamination in samples of drinking water collected at its treatment plant.
 - PCE is a volatile organic compound (VOC) and a manufactured chemical that does not occur naturally. It is widely used for dry cleaning, textile processing, and as a degreasing solvent in multiple applications.
- The BBP Water Corporation's drinking water tests show that contamination has not exceeded the federal Maximum Contaminant Level (MCL) for PCE in drinking water. The MCL is a safe drinking water limit established by the United States Environmental Protection Agency (U.S. EPA) under the Safe Drinking Water Act.
- In response to the discovery of the contaminants, the Indiana Department of Environmental Management (IDEM) initiated an environmental investigation. PCE was detected in water samples that IDEM collected directly from municipal ground water wells in September of 2014.
- To further monitor this issue, IDEM is requiring monthly testing by the BBP Water Corporation to ensure that it continues to provide safe drinking water to the public.
- Under a cooperative agreement with the U.S. EPA, IDEM's Site Investigation Program will work further to investigate the ground water contamination discovered in Spencer, Indiana. The objective of the investigation is to determine the nature of the ground water contamination, determine a potential source(s), and determine future actions.

Next Steps:

- In the summer of 2015, IDEM's Site Investigation Program will be conducting a soil and ground water investigation in Spencer.
 - IDEM will collect soil and ground water samples from various locations throughout Spencer, in addition to the BBP Water Corporation's municipal wells.
 - IDEM staff will use a direct push sampling device to obtain subsurface soil samples and ground water samples.
- IDEM staff may request access to private property in various locations to collect ground water from businesses or residences to aid in this investigation.
 - Property owners who are asked to aid in this investigation will be asked to sign a property access agreement.
 - The sampling will be conducted at no cost to the property owner.
 - IDEM will provide the property owners with their ground water sampling results at no cost.

Environmental and Health Impacts:

- Left unaddressed, the ground water contamination may become more widespread and pose a more significant threat in the future.
- PCE exposure can occur several ways, but the most common methods of exposure are through ingestion of drinking water that is contaminated or the inhalation of PCE vapors that are released into the air. It is not uncommon for PCE vapors to be released in small amounts from clothes after they have been dry cleaned. Where water is contaminated with PCE, vapors can be released into the air during bathing, cooking, and laundry activities.
- The U.S. EPA considers PCE likely to be carcinogenic to humans and the U.S. Department of Health and Human Services (DHHS) considers PCE to be reasonably anticipated to be a human carcinogen. The International Agency for Research on Cancer (IARC) considers PCE probably carcinogenic to humans.
- Short term exposure to PCE can cause dizziness or drowsiness, headache, and incoordination. Other health effects include changes in mood, memory, attention, reaction time, and vision.
- Along with this fact sheet, IDEM is distributing the *ToxFAQs™ for Tetrachloroethylene* fact sheet from the Agency for Toxic Substances and Disease Registry (ATSDR) that describes PCE and its effects in greater detail.

Additional Information:

- The public may direct questions and concerns regarding IDEM's environmental investigation in the Spencer area, including additional information on sampling results to date, environmental impacts of PCE, and potential drinking water impacts, to Nick Cooper, IDEM Project Manager, at (317) 234-3505; toll free at (800) 451-6027, ext. 4-3505; or by e-mail at ncooper1@idem.IN.gov.
- Questions and concerns about health-related impacts should be directed to the Agency for Toxic Substances and Disease Registry (ATSDR) at (312) 886-1462 or to the Owen County Health Department at (812) 829-5017.
- For additional information on the Safe Drinking Water Act (*including maximum contaminant levels*), visit U.S. EPA's website at www.epa.gov/safewater/sdwa/pdfs/fs_30ann_sdwa_web.pdf for its *Understanding the Safe Drinking Water Act* publication.
- For a copy of *ToxFAQs™ for Tetrachloroethylene*, visit the ATSDR website at <http://www.atsdr.cdc.gov/toxfaqs/tfacts18.pdf>.
- For information about IDEM's Site Investigation Program, visit IDEM's website at www.idem.IN.gov/4143.htm.
- The news media may contact Barry Sneed, IDEM Public Information Officer, at (317) 232-8596; toll free at (800) 451-6027, ext. 2-8596; or by e-mail at bsneed@idem.IN.gov.